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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,943	12/29/2003	Neil Keegstra	1122-8	7887

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EXAMINER	
HAYES, BRET C	

ART UNIT	PAPER NUMBER
3641	

MAIL DATE	DELIVERY MODE
05/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/748,943	KEEGSTRA ET AL.	
	Examiner	Art Unit	
	Bret Hayes	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9 and 11-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9 and 11-14* is/are rejected.

7)☒ Claim(s) *1* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 3 – 7, 9 and 11 – 14 have been considered but are moot in view of the new ground(s) of rejection in view of prior art.

2. In response to the arguments with respect to the rejections under 112, 2nd paragraph, examiner disagrees.

3. Applicant's allegation that 'an extended range' would be well known in the art notwithstanding, there is nothing in the specification to convey to one of ordinary skill in the art what the limitation of this recitation may be. While Applicant has attempted to clarify what the ordinary skill level is in the art, such is not provided in the specification. Neither is it considered as evidence of the ordinary level of skill, since it is merely Applicant's allegation. How 'extended' would a 'range' need to cover in order to anticipate? Or, how much 'extended range' would a projectile need to cover in order to infringe on any patent granted to such a claim?

4. In response to the argument with respect to the durometer hardness, examiner agrees with notice. Applicant contends that "the examiners [*sic*] assertion that the phrase "having a durometer hardness less than metallic rounds" is indefinite because some metal rounds, such as lead have a durometer/shore hardness less than 90" is in error because "Applicant submits that there are no references to metallic hardness measured on the Shore scale. The comparison of Lead and other metallic hardness is measured primarily in Rockwell and Brinnell scales." Examiner understands that that is indeed the case because durometer hardness is normally reserved for materials that are at least somewhat elastic. This introduces the examiner's notice. Any recitation attempting to limit the claims by comparing known durometer hardness with

unknown or unknowable durometer hardness is meaningless at the very least, and indeterminate at most. As above, how is one of ordinary skill in the art supposed to know whether an infringement is being made on any patent granted to claim containing such a limitation? If metallic rounds have indeterminate durometer hardness, how can a material have 'less than' that durometer hardness?

5. In light of the above, the rejections stand.

Claim Objections

6. Claim 1 is objected to because of the following informalities: the status identifier "(Previously Presented)" would appear to be in error and should be --(Currently Amended)--. Of course, upon entrance of another amendment, the identifier can be "(Previously Presented). Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1, 3 – 7, 9 and 11 – 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention. The recitation "non-penetrating" before projectile in at least claims 1 and 7 has not been disclosed in such a way as to enable one of skill in the art to make the projectile.

9. For example, paragraph **[0019]** of the specification states in part that the "less lethal shot gun slug of the present invention...is formed of a material having low velocity and is resistant to target penetration upon impact". Note that 'resistant to penetration' is not the same as 'non-penetrating' with respect to projectiles. It is akin to the difference between waterproof, which is entirely impervious to water, and water resistant, which is not. There is nothing in the written description to give meaning to the recitation and, therefore, construe that the projectile would not penetrate *any* target, broadly and reasonably.

10. For examination purposes, the claims will be interpreted to mean resistant to penetration.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

12. Claims 1, 3 – 7, 9 and 11 – 14 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 1, 3 – 7, 9 and 11 – 14 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed 05 MAR 07. In that paper, applicant has stated "Applicant submits that there are no references to metallic hardness measured on the Shore scale," and, "The comparison of Lead and other metallic hardness is measured primarily in Rockwell and Brinnell scales", and this statement indicates that the invention is different from what is defined in the claim(s) because the claims require that the material have a durometer hardness less than metallic rounds. If such a determination is impossible, then clearly the Applicant does not have possession of the claimed subject matter. See above.

13. Alternatively, claims 1, 3 – 7, 9 and 11 –1 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

14. For the reasons set forth in the response to arguments and the rejection under 112, 2nd paragraph above, the metes and bounds of the claims cannot be determined with any accuracy with respect to durometer hardness of metallic materials.

15. Specifically, claim 7, recites "a durometer hardness less than conventional shot gun projectile materials. Examiner has evidenced, see US Patent No. 6,527,880 to Amick, that 'conventional shot gun projectile materials' can indeed include rubber, since it well known in the art to make such a substitution.

16. Any not specifically mentioned is rejected as being dependent upon a rejected base claim.

17. The claims will be further treated on the merits ***as best understood*** only.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

19. As best understood, claims 1, 3 –6 are rejected under 35 U.S.C. 102(b) as being anticipated by FR 2639104 A3 to Levoux et al. (*Levoux*).

20. Re – claim 1, Levoux discloses the claimed invention including an extended range less-lethal projectile munition comprising: a non-penetrating kinetic energy projectile **4**, Fig. 2, for

example, having a generally cylindrical body including a forward end and rearward end; said forward end including a protruding convex member **5** extending therefrom, such that the center of mass of said projectile is closer to said forward end than to said rearward end, thereby increasing the weight of said body at said forward end, and further including a hollow cylindrical bore **9** extending from said rearward end wherein said cylindrical body is solid from said cylindrical bore to said forward end; and said body being formed of a homogeneous, non-metallic material having a durometer hardness less than metallic rounds. At page 2, line 15, Levoux discloses that the body of the projectile **4** is made of supple and elastic material: "un corps réalisé en une matiére souple et élastique", or, 'a body made of supple and elastic material'. Clearly, if the material is supple and elastic, it would inherently have a durometer hardness less than metallic rounds, since metallic rounds are not usually known for their suppleness and elasticity.

21. Re – claim 3, Levoux clearly discloses the protruding member **5** being domed shaped.

22. Re – claim 4, Levoux further discloses wherein the domed shaped protruding member **5** is surrounded by a rim **6, 7**.

23. Re – claim 5, while Levoux does not explicitly state that the body is manufactured of material molded from the group consisting of rubber, foam and plastic, the entire group is implied because not many other alternative materials come to mind from which to make the body both 'supple and elastic'. It could be argued that Levoux may make the body from naturally occurring sponge, but that would be more than a stretch.

24. Re – claim 6, as best understood in light of the above, because a durometer hardness of 20 'OO scale' is roughly equivalent to chewing gum, that of 90 'A scale' is harder than

automotive tire tread and 90 'D scale' is harder than a hard hat, as examples, a supple and elastic material as disclosed by Levoux would appear to anticipate this claim limitation.

Claim Rejections - 35 USC § 103

25. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

26. Claims 7 and 11 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Nos. 4,043,267 to Hayashi in view of Levoux.

27. Re – claim 7, Hayashi discloses a less-lethal shot gun round comprising: a generally elongate tubular hull **25** having a forward end and an opposed rearward end; a base, Figs. 4, 5, 8 and 9, for example, enclosing said rearward end of said hull; a propellant **26** contained within said base; a wad, Fig. 7a, for example, sealably positioned in said hull adjacent said rearward end; and a non-penetrating* kinetic energy projectile **27** carried in said hull, said slug being a generally cylindrical member, Fig. 7b, for example, having an outer cylindrical wall, said projectile having a rearward end with a hollow cylindrical bore **27'** extending from said rearward end and further including a convex solid head, Fig. 10, for example, extending from said cylindrical bore to said forward end of said cylindrical member such that the center of mass of said projectile is closer to said forward end than to said rearward end, thereby increasing the weight of said projectile at said forward end; said projectile being formed of a homogeneous material. Since the cross-hatching is the same for the entirety of element **27**, it is asserted that it is homogenous. However, Hayashi does not disclose the projectile being non-metallic and having a durometer hardness of less than conventional shot gun projectile materials. Levoux

teaches that materials that are supple and elastic can be used as substitutes in the same field of endeavor for the purpose of manufacturing training ammunition. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi as taught by Levoux in order to manufacture a training projectile. Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a supple and elastic material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. In this case, Levoux makes it clear that such materials were well known alternatives in the art at the time of invention.

28. Re – claim 11, Hayashi in view of Levoux further discloses the group of materials selected for manufacture. See claim 5 above.

29. Re – claim 12, Hayashi in view of Levoux further discloses the material's durometer hardness. See claim 6 above.

30. Re – claims 13 & 14, Hayashi in view of Levoux further discloses the material's mass and weight being less than conventional shot gun projectile materials. Because the materials selectable for manufacture are limited to those that are supple and elastic, examiner contends that those same materials would have less mass and weight than 'conventional shot gun projectile materials', 112, 2nd rejection above notwithstanding and presuming Applicant intends metallic materials.

31. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Nos. 4,043,267 to Hayashi in view of Levoux, further in view of US Patent No. 6,615,739 to Gibson.

32. . Hayashi in view of Levoux disclose the claimed invention except for the outer cylindrical wall being dimpled. Gibson teaches putting dimples on the surface of the projectile, Fig. 8, for example, in the same field of endeavor for the purpose of increasing accuracy and distance. It would have been obvious to one having ordinary skill in the art at the time of invention to include dimples on the surface of a projectile taught by the Hayashi in view of Levoux in order to increase accuracy, distance and/or both. Motivation would include better accuracy at greater distances for shot guns.

Conclusion

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Bret Hayes at telephone number (571) 272 – 6902 or email address bret.hayes@uspto.gov. The examiner can normally be reached Monday through Friday from 5:30 am to 2:00 pm, Eastern Standard Time.

The Central FAX Number is **571-273-8300.**

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached at (571) 272 – 6873.

Bret Hayes

23-May-07

MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER